

WHAT IS CLAIMED IS:

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1. An IC chip for providing an exciting current to an MI element of an MI sensor, which MI element detects an external magnetic field, the MI chip comprising:

10 an MI element electrode to which the MI element is connected;

a switch unit that, in response to a pulse signal, provides the MI element with the exciting current via said MI element electrode; and

15 a first power supply electrode through which said switch unit is provided with electric power;

the IC chip having a first side face and a second side face opposite the first side face;

20 wherein

said MI element electrode is disposed in a neighborhood of the first side face; and

said first power supply electrode is disposed in a neighborhood of the second side face.

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2. The IC chip as claimed in claim 1,  
5 wherein said MI element electrode, said switch unit,  
and said first power supply electrode are disposed  
substantially linearly.

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3. The IC chip as claimed in claim 1,  
further comprising:

a detected signal electrode to which a  
15 detected signal is provided from the MI element;  
a signal processing unit that receives the  
detected signal via said detected signal electrode  
and processes the received detected signal; and  
a second power supply electrode through  
20 which said signal processing unit is provided with  
electric power;

wherein

25 said detected signal electrode is disposed  
in a neighborhood of the first side face; and  
said second power supply electrode is

disposed in a neighborhood of the second side face.

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4. The IC chip as claimed in claim 3,  
wherein the electric power is provided to said switch  
unit and said signal processing unit through  
different power supply wirings.

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5. The IC chip as claimed in claim 3,  
15 wherein said switch unit and said signal processing  
unit are connected to different ground lines.

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6. An IC chip for providing via an MI  
element electrode an exciting current to an MI  
element of an MI sensor, the IC chip comprising:  
a switch unit that, in response to a pulse  
25 signal, provides the MI element with the exciting

current via the MI element electrode; and  
a signal processing unit that receives a  
detected signal from the MI element and processes the  
received detected signal;

5                   wherein

electric power is provided to said switch  
unit and said signal processing unit through  
different power supply wirings.

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7. The IC chip as claimed in claim 6,  
wherein said switch unit and said signal processing  
15 unit are connected to different ground lines.

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8. An MI sensor, comprising:

an MI element for detecting an external  
magnetic field; and  
an IC chip for providing an exciting  
current to the MI element;

25                   wherein

said IC chip comprises:

      an MI element electrode to which the MI element is connected;

      a switch unit that, in response to a pulse 5 signal, provides said MI element with the exciting current via said MI element electrode; and

      a first power supply electrode through which said switch unit is provided with electric power;

10           wherein said IC chip has a first side face and a second side face opposite the first side face; and

      wherein

      said MI element electrode is disposed in a 15 neighborhood of the first side face; and

      said first power supply electrode is disposed in a neighborhood of the second side face.

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      9. The MI sensor as claimed in claim 8, wherein said MI element electrode, said switch unit, and said first power supply electrode are disposed 25 substantially linearly.

5                   10. The MI sensor as claimed in claim 8,  
wherein

                  said IC chip further comprises:

                  a detected signal electrode to which a  
detected signal is provided from said MI element;

10                a signal processing unit that receives the  
detected signal via said detected signal electrode  
and processes the received detected signal; and  
                  a second power supply electrode through  
which said signal processing unit is provided with  
15                the electric power;

                  wherein

                  said detected signal electrode is disposed  
in a neighborhood of the first side face; and

                  said second power supply electrode is  
20                disposed in a neighborhood of the second side face.

25                11. The MI sensor as claimed in claim 10,

wherein the electric power is provided to said switch unit and said signal processing unit through different power supply wirings.

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12. The MI sensor as claimed in claim 10,  
wherein said switch unit and said signal processing  
10 unit are connected to different ground lines.

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13. An MI sensor, comprising:  
an MI element; and  
an IC chip for providing an exciting  
current to the MI element via an MI element  
electrode;  
20 wherein said IC chip comprises:  
a switch unit that, in response to a pulse  
signal, provides the MI element with the exciting  
current via the MI element electrode; and  
a signal processing unit that receives a  
25 detected signal from said MI element and processes

the received detected signal; and

electric power is provided to said switch unit and said signal processing unit through different power supply wirings.

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14. The MI sensor as claimed in claim 13,  
10 wherein said switch unit and said signal processing unit are connected to different ground lines.

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15. An electronic apparatus into which said MI sensor as claimed in claim 8 is built.